

9.0 Cost Control

The cost model (Exhibit 9.1), is based on validations and proposals, and outlines various possibilities. The project can be constructed with a range of costs. In the coming months decisions will be made regarding scope definitions, scope limitations, constructability and maintenance of traffic. This section presents certain scenarios for the decision-makers to consider in the future.

Scenario #1: Maximum cost with all reserves exceeds the appropriate level of funding.

Major cost elements associated with the high maximum cost are as follows:

	Cost (2001) in Millions		
	A	C	R
1. Maintain I-94 traffic all the time with minimum restrictions			\$50.0
2. Build the South leg of M-10 for 4300 lineal feet	\$31.7		
3. Dequindre bridge reconstruction		\$16.5	\$11.2
4. Include GTW/Conrail Bridge in this contract			\$18.7
5. Separate storm water system			\$40.6
Subtotal	\$31.7	\$16.5	\$120.5

Total = \$168.7 Million

A = Allowance  
C = Contingency  
R = Reserve

With an in-depth study, the issues behind this cost increase can be resolved and considerable cost can be eliminated. It is possible to reduce the maximum cost to be in the range of \$910 million (2001) and \$950 million (2002).

Ref.: Validation #3a, #4 and #5; Proposal #12.

Scenario #2: The difference in cost of retaining wall between DEIS and VE is too large.

Allowance	Contingency	Reserve
\$21,038,000	\$27,750,000	\$23,125,000

There is a cost difference of \$71.9million between DEIS and VE approach. A detailed study is warranted to resolve the difference in the height of wall and unit costs resulting in this large difference. Until such time, this cost should be left under the allowance, contingency and reserve categories.

Ref.: Proposal #1

Scenario #3: I-94/I-75 interchange can't be built as shown with the constraints.

An independent study is needed to explore options to make this scenario feasible. Keypoint is the continuity of service road through the interchange.

Ref.: Validation #2

Scenario #4: Enhancement is not clearly defined.

DEIS allocated a sum of \$62,796,820 for enhancement without any specific program. Based on previous experience of large projects, an allowance of \$13,397,000 and a Reserve of \$6,699,000 (total of \$20.1 million as opposed to \$62.8 million) are allocated for enhancement. A clear definition and scope of enhancement must be defined. Major stakeholders are sensitive to this issue. A clear commitment and appropriate cost allocation is critical to keep the project within budget.

9.1 Cost Management

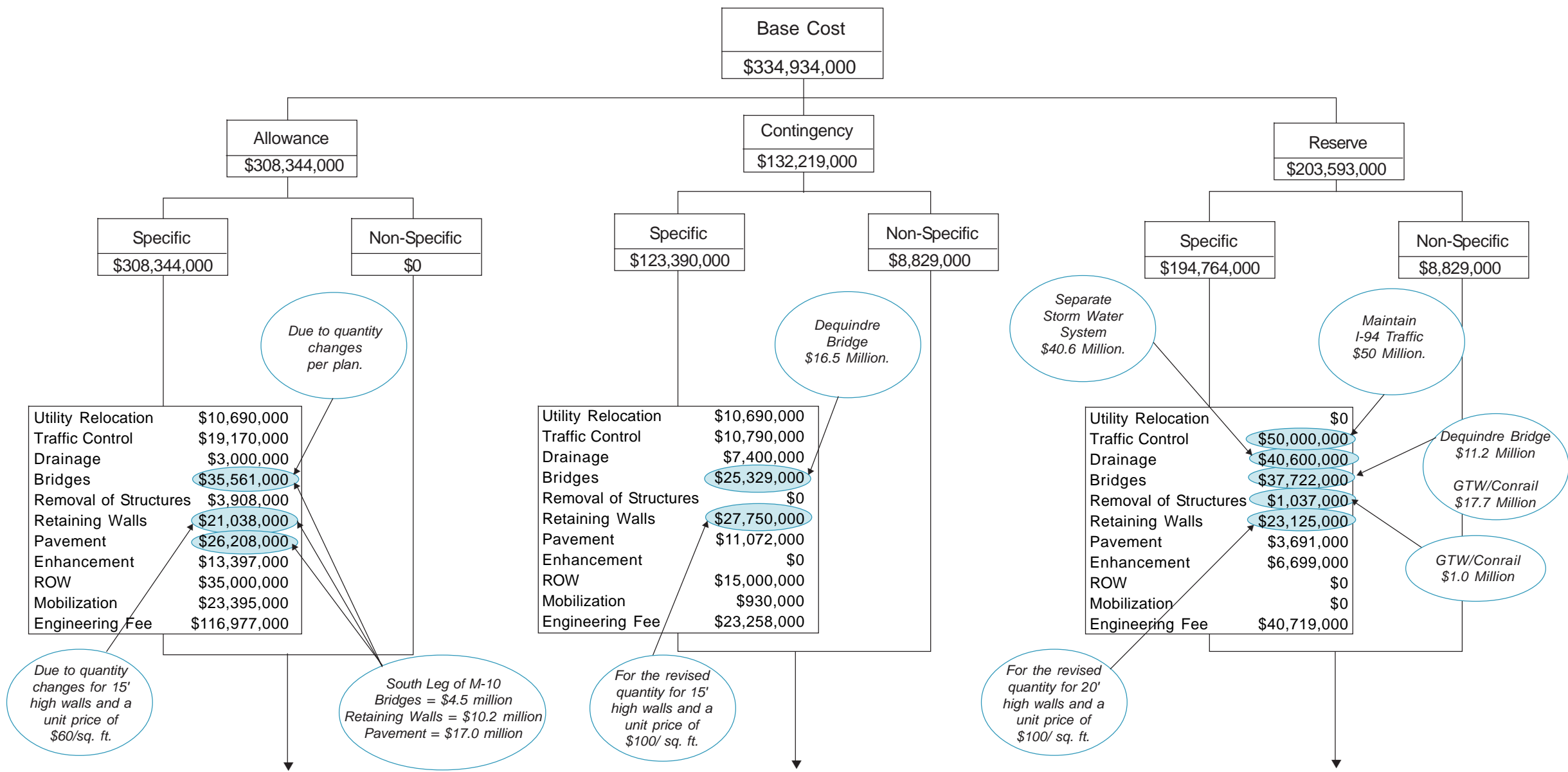
During the next phase of the Engineering Study, the construction elements will be detailed further. Cost of these elements that are in allowance will be moved to the base cost. If the cost of such elements exceed the allowance, MDOT should be notified of the possibility of cost increase with justifications.

In the near future, MDOT along with stakeholders, will make policy decisions that will affect the cost; enhancement, scope, maintenance of traffic are examples of such items. MDOT should be notified of the potential cost changes and the cost model should be modified accordingly.

ASTM Standard labels the three successive levels as construction cost, project cost and program cost. This report modified those levels to minimum cost, expected cost and maximum cost. As the project progresses to a detailed level, minimum cost should be the construction cost; expected cost will be project cost and the maximum cost will be the program cost.

The design team will manage the construction cost and MDOT will control the program cost.

9.0  
RESOLUTION\IMPLEMENTATION  
PHASE



Minimum Cost

Base Cost		\$334,934,000
Allowance	+	\$308,344,000
<hr/>		
Total Minimum Construction Cost (2001)	=	\$643,278,000
Total Minimum Construction Cost (2002)	=	\$675,442,000
Total Minimum Construction Cost (2004)	=	\$744,675,000

Expected Cost

Total Minimum Construction Cost		\$643,278,000
Contingency	+	\$132,219,000
<hr/>		
Total Expected Construction Cost (2001)	=	\$775,497,000
Total Expected Construction Cost (2002)	=	\$814,272,000
Total Expected Construction Cost (2004)	=	\$897,735,000

Maximum Cost

Expected Construction Cost		\$775,497,000
Reserves	+	\$203,593,000
<hr/>		
Total Maximum Construction Cost (2001)	=	\$979,090,000
Total Maximum Construction Cost (2002)	=	\$1,028,045,000
Total Maximum Construction Cost (2004)	=	\$1,133,420,000

VE Cost Model

Exhibit 9.1  
I-94 EPE VE